On preventing fever from exhalation.

"Odia in longum jacens, quæ recondent, omnia que promeret!"

Lectures on the means of preventing Summer & Autumnal Fevers. Tel. Jan. 17. 1804. begin p:19

Origin of Epidemics from bad food, water, & Earthquakes - how prev.d?

in the present instance

By ~~this~~ disease I mean morbid excitement or ~~preternatural~~ irregular action, of a partial nature ~~proceeding~~ ~~in muscular~~ ~~fibres~~ seated in different parts of the body.

Gentlemen /

I rise in compliance with your appointment to deliver as the Subject of my Oration, the result of the Observations of four and forty years upon the Summer & Autumnal Disease of the United States. V

In considering this disease, I shall I enumerate its different forms, & afterwards make a few remarks upon them. II I shall mention its causes, & ~~II I shall~~ III I shall point out the means ~~which have been used~~ of preserving the System ~~of~~ from them, & IV mention the methods of ~~with facility to prevent it~~ preventing them, by extirpating this causes.

~~I You will perceive~~ at once that I have adopted the idea I have taught for many years in the University of Pennsylvania by calling the

I The different forms of our Summer & Autumnal disease may be included under the following heads

1 Diarrhœa.
2 Cholera morbus.

+ ~~I pass over these forms of disease in which the~~ indisposition

v That all the above forms of disease differ ~~are the same in the~~ only in their heat, and ~~degree of~~ symptoms, but are the same in their nature, I infer from their appearing at the same seasons, ~~from~~ from their changing into each other, depending upon the same cause, & disappearing ~~from~~ at the same time.

+ I pass over all ~~these forms~~ of indisposition under which the summer & autumnal disease sometimes disguise themselves, such as headache - tooth ache - opthalmia - lumbago & ~~the~~ ~~liberal~~ all the ~~same~~ other local affections as mentioned by Dr Cullen.

Also sporadic cases of all so from other causes —

3 bilious Colic. 4 Dysentery - 5 Febriculas or what is called in the Southern States inward fevers. 6 Mild Intermittent 7 Mild Remittent. 8 Choo=-rie ~~fe~~ or typhus fever. 9 Inflammatory bilious fever, and 10 malignant, bilious, or What is commonly called yellow fever. +

It may appear strange ~~odd to some~~ to such of the members of this Society as have not been my pupils, to include ~~consider~~ all the forms of disease which have been mentioned under one name - But there are many precedents for doing so in our ~~the writers upon~~ ~~science of the~~ practical books of medicine. I shall mention but one of them. ~~but to not~~ The Gout ven=-gies not only the limbs, but ~~the bad~~ every other part of the body, but ~~we denote~~ ~~animated~~ upon that account distinguished by a plu=-ral epithet. The small pox affects with disease & pain, not only the skin, but the head, the throat, the lungs, the ~~the~~ bowels & the kidneys,

~~v the United States~~

and yet we do not find it has 3 received new names from each of those parts in our histories of diseases. ~~By the Summer & Autumnal disease of the~~ Annual Epidemic of our Country ~~some~~

1 The ~~Diarrhoea & Colera morbus~~ ~~regularly~~ ~~times appearance~~ generally ~~appears in the form of~~ ~~Diarrhoea &~~ makes its first appearance in July in the middle states in which month it puts on the form of Diarrhoea & Colera morbus.

2 In the month of August it assumes the more dangerous forms of Dysentery & Colic, with now & then the forms of fever in which case, it ~~is either of~~ ~~consists~~ generally ~~of a single or at most of but two &~~ terminates in one day, or in two or three days.

~~They also are frequently excited by unusual~~ ~~or damp~~

~~fruit &c.~~

3 The Dysentery ~~is a more common~~ appears more frequently in Country places than in Cities. I have never seen it Epidemic in Philadelphia. The ~~diet~~ more cordial diet of the inhabitants of Cities probably

defends the bowels from the influence of miasmata ~~upon them~~, and determines their action to ~~other~~ the blood vessels in one of the forms of fever.

4 The Dysentery appears chiefly ~~in his~~ upon high grounds – ~~is~~ ~~while other~~ & frequently at the same time that forms appear upon ~~this~~ the declivities of those grounds, or in the plains below them.

5 The different forms of fever appear sepe=rately, or together in different years. In the year a mild Intermittent

Between the years 1760 & 1766 it appeared ~~chiefly~~ chiefly in the form of the what ~~what~~ formerly called nervous fever, and ~~who~~ was often protracted to ~~one and~~ twenty ~~or~~ thirty & forty days. In the year 1780 it appeared in Philad.

in the form of mild Remittent at which time it was known by the name of the Beach Lane fever. The febricula appears frequently ~~into~~ in Maryland, unaccompanied with any other form of fever. At this time it is said "though no body is sick, yet no one is perfectly well!" Mr Volney in his travels thro' this country ~~made travels with this general furnishes~~ of the ~~inhabitants of the southern states~~, & informed me that he ~~found in his~~ discovered this general unhealthiness among the inhabitants of ~~to prevail~~ other sections of the Southern States in the fall of the year. The inflammatory bilious fever prevailed alone in the city of Philad^a in the years 1791 & 1792. It was the forerunner of the malignant, or yellow fever which prevailed in the year 1793, & which ~~has~~ for several

years since has been the solitary Epide-
-mic of our city. But again - all these
forms of fever appear together in the same
~~but apparently independently of each other.~~ ~~This was the case in Philadelphia in~~
season & ~~the year 1802.~~ Sometimes & sometimes they run into
each other. This was the case in the I have said
year 1802 & 1803. The mild Intermittent changed
into a malignant yellow fever & the malignant
yellow fever after the 3d day put on the form of
a mild Intermittent ~~The same malignant~~
~~fever~~ and sometimes of a nervous fever.
The same forms of
~~The~~ Summer & Autumnal Disease differ
in different years in ~~its~~ their symptoms - in ~~its~~ their
signs of life and death. ~~in its modes of cure.~~
& a ~~dry~~ skin impervious to sweat
~~The~~ Obstinate costiveness attended the malignant
fever of 1793 a Diarrhea attended the same
form of fever in 1802, and a moist skin was
a general symptom of ~~the~~ it in 1803. a

1 V. Diff^n Const^n afford diff^t grades of disease – also residence as new Comers in West Indies.

Different grades of Activity in Miasmata – as from Water to g^l Street.

1 V affects hues, Colors &c – ages &c Nations – Why fresh West Indies escape it & we not.

2 also differs in requiring more or less ex:

– citing Cause Dr Mangin's story.

3 It appears earlier, or is more pronounced – or worst near Confluence of fresh & salt water. Elliott.

its predisp^n: as in Tiverd: fevers & Apoplexy?

4 yield to frost & ice – heavy rains –

It will be expected I add Contag: – in what like consump^n

Instances – never Epidemic from it.

5 They are most apt to affect Strangers, more part^y higher grades. Obvious in Hav^a than in middle States, where the colds of winter &c follow clearing Country.

6 Old people kept alive by them.

7 Different Determin^ns as head – Stomach – limbs & above all Liver. In 1791 & 1792 Dysp^a very common & follow Course of winds. Smithill.

sore throat was a favorable symptom in the malignant form of 1793 - but a fatal one in the same form in 1798. an hemorrhage from the gums which preceded death in 1793, was followed by a recovery in nearly all the cases in which it occurred on the 5th day in 1798. copious bleeding, & strong mercurial purges were the most effectual remedies in the malignant form of 1793. the same remedies yield to moderate bleeding, gentle purges early blisters & copious sweats in the year 1803.

The disease under consideration differs in its symptoms, in different parts of the same season. It sometimes comes on like a beast of prey, and goes off w: the gentleness of a domestic animal. Again its pets on an opposite character. Sometimes it makes its first appearance in the form of a Dysentery, & changes in its course into malignant fever. Dr Deval

sometimes known on the first visit, again not so -
V. Yellow fever known first visit - in 1793
not so in 1802 & 1803.

93

8 ~~Whenever they have~~ All the forms that have been mentioned of fever ~~impart~~ when they become Epidemic chase away all other forms of disease, or impart some of their Symptoms to them. ~~Thus the Gout in 1780 put on the symptoms of a Intermittent~~ The puerperile fever becomes an Intermittent during the prevalence of that form of fever. The ~~malignant~~ yellow fever of ~~1793~~ 1793 blended its malignant Symptoms with the Gout & every other form of disease. In the year 1798 it ~~predominated over the fever treated by a broken leg~~ it discovered its universal Dominion ~~over by~~ by ~~a predominating~~ mixing with ~~an~~ the fevers which were excited by ~~a broken leg~~ accidents, & in one instance ~~finally~~ sealed its presence by a ~~convulsive~~ black Vomiting on the 5th day after a Broken leg.

I ~~Dear~~ ~~Medicine~~ Disease ~~differs~~ Summer & Autumnal yields in different months of the years, and in different ~~parts of the person~~ same year to ~~a~~ different modes of Cure.

~~In~~ The ~~year 1793 the~~ malignant fever of the year 1793 ~~yielded only~~ required to copious bleeding, strong purges ~~&~~ salivation. The same fever in 1803 was cured by a moderate bleeding, ~~gentle~~ active purges, early blisters, and copious sweats. The peruvian Bark was exhibited with universal success in the autumnal intermittents of 1781, the same medicine did harm in the intermittents of 1794. Bleeding proved ~~fatal~~ suddenly fatal in the malignant fever of 1793 in the ~~beginning of the~~ month of August. After the ~~diminution of the~~ stimulus of heat was abstracted from that of Disease matter in ~~the~~ near the middle of September the ~~same remedy~~ blood ~~to~~ vessels rose under

v Dr Blanis yellow Skin only a

the use of the ~~[illegible]~~ lancet, but finally became its ~~general use~~ principal and most successful remedy.

10 The summer & autumnal differs in its degrees of mortality in different years, & sometimes in different parts of the same season. — ~~The Remittent for the Holiday~~ Few recovered from the malignant fever of 1802 — a few died of the same fever in the year 1803. The malignant fever of 1793 was rarely fatal when treated with ~~bl~~ depleting remedies in their whole system; ~~the~~ ~~the whole~~ it resisted force ~~of more remedies~~ of medicine in the succeeding month. This difference in the mortality of the yellow fever is not confined to the United States.

Dr Halliday lost but

While Dr Hosne acknowledges that ~~the~~ seldom ~~most die~~ more than ~~3 to~~ 3 in 4 recover

V I shall only add two remarks. 1 ~~Study~~ ~~Study~~ Diseases in their connections with each other &c muscular motion &c. ch we see in Vol. II on Epidemics

2 Study every Epidemic every year.

X How do they act? Stomach – lungs – pores.

in the most dreadful practice on the Island of Jamaica. — It would ~~seem as if this~~ ~~seem~~ be foreign to the ~~des~~ design of this discourse to inquire into the Causes which produce the variety in the forms, grades, &c of our Summer & Autumnal disease. I shall only observe that ~~most of them may~~ they are chiefly ~~be discovered~~ to be sought for in the sensible & insensible qualities of the Atmosphere & in the Course of Winds, and in the qualities of the ~~aliments~~ Aliments of different years.

I come next to mention the causes of the disease which is the subject of our Oration[x]. These are chiefly

~~Both Troops~~ while foreign Countries are obliged to look for their ~~to~~ Epidemics in exhalations from Volcanos — & wells, or springs of water, ~~which are very~~ in addition to

V

1

V. They are more or less active according to the sources from whence they are derived. The exhalations ~~of~~ from filth in cities ~~are~~ more active, than ~~in~~ those ~~which arise in the~~ from marsh exha-
-lations, & the exhalations in cities from Docks & cellars, & the holds of ships more active than from Sheets & Gutters

putrid exhalations from putrefied vegetable and animal matters. bad water. We are under no necessity of extending our views beyond the last source that has been mentioned to account for our annual Epidemics upon the subject of exhalations in our Country, I shall make the following remarks. —

They are derived chiefly from putrid matters of a vegetable nature. These are

1 These exhalations are the product of certain degrees of heat & moisture. The most productive sources are inoffensive when dry, or covered with water.

3 They are conveyed to a considerable distance by the Winds. In some instances to two miles. Mr Lempriere mentions some facts which prove they are carried miles in the Island of Jamaica.

4 They are most active in the morning, and

in the morning. They ~~in~~ are least so in middle of the day, and night.

5 They spread more in Damp, & cool weather, & warm weather.
high latitudes. see vol. 5 p. 105

6 ~~They are~~ Their activity is destroyed by cold
When it ~~is~~ produces ice. ~~It is~~ They are likewise ~~destr~~ suspended by heavy rains, & destroyed by them when they are succeeded by weather so cool, as not to admit of exhalation.

7 They are frequently accompanied ~~by~~ with an offensive odor ~~smell~~, but they exist sometimes in a very deleterious form, without being perceived by the sense of smelling.

8 They have hitherto eluded the inquiries & experiments of the Chemists. Some late physicians have been so far misled by their ~~ignorance of the subject~~ inability to discover them in the air, as to deny the existence of chemical agents as well might ~~they~~ deny the existence of odors in the air.

~~because they are alike imperceptible~~ for they like
are alike ~~imperceptible to the test of the~~ resist the Endeu:
=metrical experiments.

v 9 ~~From them~~ It has likewise been asserted that
they do not produce the diseases that have been
mentioned ~~because, they do not act uniformly,~~
~~&~~ because some of the filthiest cities in Europe are
exempted from them, and because they do not
act uniformly in our own Country. In an:
=swering the first of these Objections, it will be
proper to remark that filth & dirt are two
distinct things. The streets of a city may be very
dirty, ~~and not filthy~~ that is, covered with ~~inof:~~
and composed of inoffensive
~~fensive~~ clay, or sand, or lime, & tho at the same
time be free from ~~them~~ those filthy veg: & animal
matters which by putrefaction contaminate
the air. This I believe is the case with Lisbon, &
~~how it~~ some of the cities in Italy. To the

√ a similar, ~~one~~ want of uniformity appears in the ~~production of~~ operations of our climate appears in the line, equality of grain ~~and~~ fruits & vegetables of all kinds

second Objection I reply that ~~those~~ the want of Uniformity in the exhala-tions of our Country in producing diseases, depends upon ~~many circumstances~~ their being combined with more or less heat, or moisture, and ~~perhaps~~ upon the indisposition of the body from the Elements of the Season - but ~~opposite~~ different Currents of Winds, or the total Absence of Wind - ~~but~~ upon the Disproportion of temperature of the Air in the Day & Night - upon the Quantity of Dew - upon the early or late appearance of warm or cold weather, all of which vary in different years. The ~~frequent~~ more frequent prevalence of the malignant bilious fevers in our Country, than in former years, ~~may be accounted for upon~~ requires a Specific explanation. ~~The fact~~ From the ~~longer~~ longer encroachment which the heat of Summer has made upon the ~~cold~~ Autumnal months a longer period is given for the generations ~~generation accumula-tion of~~

~~fouling~~ of putrid exhalations, and possibly further
greater concentration and activity. But the late increase in
malignity of our ~~bili~~ bilious ~~fever~~ disease must be
resolved chiefly into a more ~~active~~ fixed state ~~change~~ in the atmosphere
from causes that ~~they~~ are as yet unknown to
us. ~~To the existence of this~~ It ~~has been~~ was observed
~~even since the days of~~ by Hippocrates, and has been
acknowledged by ~~many~~ physicians of ~~all ages~~ all ages &
countries. It is sometimes general over a whole
nation, again it is confined to cities ~~or provinces~~ Districts.
provinces & states.
It is ~~transient~~ sometimes permanent, ~~or again~~
but it is more frequently transient in its effects.
It discovers itself not only in a greater excitement
of the system in diseases, but in many changes which
take place in the animal & vegetable creation. Even
fishes ~~of fishes & dies~~ feel its influence in their watery
portion of the globe. Of this, many proofs are to be
met with in the histories of pestilential diseases.
~~But having all this~~ ~~As~~ this solution of the
want of uniform connection between the human

& Autumnal Disease of our country, & of ~~the worst~~ bad water & diet - fruit ~~appearance of the bilious~~ ~~yellow~~ fevers ~~in this~~ ~~no~~ ~~and the~~ putrid exhalations not admitted, I will add a fact that ~~establish this~~ all ~~cannot be denied~~ in favor of ~~this~~ its being derived exclusively ~~from~~ in all its forms from that source only, and that is - there never was - while I admit ~~the want of a uniform~~ that putrid exhalations do not from the causes that have been admitted uniformly, or in successive years produce a bilious ~~malignant~~ diseases I will add that ~~they do~~ ~~have~~ ~~do not existed fever~~ it never has existed in any form ~~without~~ independently of them. ~~Examine the~~ From the plaques of Athens, and the Intermittents of Campania, down to the malignant fevers of Philadelphia, and the Intermittents of the Shores of Skuylkill, ~~every~~ in the year 1803, every form of Summer & Autumnal disease has existed in only in the vicinity of ~~putrid~~ noxious exhalations. It is

v of these fevers ~~the~~ native sympathetics in
see p: 21 ‡ & p 220

v all the ten ~~fevers~~ of Summer & Autumnal
Disease originate from putrid exhalations. I
have mentioned all their sources, & the laws
which govern them formerly. we

‡ first mention all its sources fevers
vol: iv also The 11 forms of Autumn fevers
external & internal.

tive these exhalations have not ~~only~~ always been derived from putrid vegetable & animal matters. ~~Then~~ ~~effs~~ Equally baneful or sickly exhalations ~~have~~ spring from the bowels of the earth after an Earthquake, ~~and~~ from ~~Caverns~~ fissures in mountains, & from wells, and pools of water have now & then produced ~~Epidemics~~ epidemic fevers, but these may be considered as of an accidental or sporadic nature. They ~~seldom~~ appear but rarely, and seldom return in the same Country. They are like the cases of malignant fevers which are produced by a poisonous dose of opium or Corrosive Sublimate compared with those which arise from the ordinary exhalations of our docks and Cellars. Nor shall I here except the occasional ~~from~~ Epidemics which have arisen from scanty, or unwholsome diet in ~~foreign countries~~ distant ages & foreign Countries. They occur but rarely, & ~~for~~ should constitute no Objections to ~~Objections to~~ the truth of the general remark which has been delivered. During the prevalence

V

V^t We proceed in the 3rd place to ~~mention~~ enumerate

V For this purpose it will be necessary to mention the signs of their presence in the atmosphere when they are disposed to produce the highest grade of bilious fever. ~~These signs as~~ I shall mention such signs as as are external, & 2: by such as appear in the human body. The external signs of a pestilential ~~app~~ ~~atmosphere~~ Epidemic appear

the means of obviate the morbid effects of these exhalations upon the human body. ~~The first step for this purpose is to ascertain the approach of I shall begin~~ more especially when they are accompanied with that state of the atmosphere which disposes them to produce the malignant or pestilential form of bilious fever. ~~first surprising to mention it~~ premi ~~ises. Upon an~~ external, & 2 they are in the body. ~~Hence~~ Many attempts have been made to discover by external signs the approach ~~of the~~ and ~~virulence of~~ pestilential diseases, ~~in~~ order to guard the body against them. Diemerbroek mentions that ~~quantities~~ a ~~frequent~~ sudden disappearance of birds that ~~are~~ were common at the season of their flight, & ~~the~~ a greater frequency of abortions preceded the great plagues which he ~~witn~~ describes at Nimeguen. The approach of the malignant bilious fever in ~~our country~~ this city has been indicated in different years by the following signs. 1 In the unusual violence in the diseases of the previous year or season. The intermittents

of 1791. & 1792 ~~did not yield as formerly to~~ assumed so inflammatory a
~~the~~ type, as to require bleeding, to prepare them
for the use of the Bark, & the plenitude of most
of the Springs which preceded our malignant
fevers have called for more depleting remedies
than ~~the same disease~~ in other years, to cure
them. Nature is uniform in these premonitory
signs of ~~fev~~ greater fever in the diseases which
precede pestilential fevers in other Countries.
They occurred according to Dr Sydenham in the
fever which preceded the great plague in
London in 1665. They were observed likewise in
a fever which ~~)~~ of this, ~~as~~ there are many
hundred instances in the records of medicine.
Even Dr Chisholm whose ideas of pestilence
exclude ~~all~~ its connection with ~~extreme~~ the
state of the atmosphere, has ~~was~~ added his
testimony to the evidence of Ages in favor of
this remark, & thereby refuted his ~~own~~ own doctrine
of its contagious & importable ~~nature~~ nature. He

V. total suspension of diseases of all kinds just before the appearance of a malignant Epidemic.

~~The months of ka~~ ~~in 17.. were~~

Unusual healthiness in the months of 17..

preceded the furious fires of

I have ascribed this to the preternatural stimulus of the atmosphere ~~impregnated with~~ ~~dangerous~~ overcoming the action of weak diseases.

in vol. 3. p: 180 facts from Diamk N. 162.

It would seem as if great & mortal Epidemics had like the planets, satellites revolving round them. For they are not only preceded, ~~by~~ but accompanied & followed by diseases which appear to ~~divine~~ reflect back upon them some of their violence & malignity. But there is sometimes an exception to this remark, for we ~~sometimes~~ now & then see a total V. in above V

epidemics its being preceded by a violent Inundation in July, & accompanied by a small pox equally malignant with itself in another ~~the~~ Island. ~~of~~ . It o +. ~~Sometimes there is a~~

2 ~~The malignant form of bilious fever has been preceded by a general sallowness in the complexions of our citizens. This has been noticed by Strangers. It occurs in other countries subject to the same fevers.~~

2 ~~They appear in~~

3 ~~It has been preceded & accompanied by~~ winds from unusual quarters, or by unusual calms. The winds have blown ~~for~~ more constantly from the S.W. during our pestilential years than in former years.

3 Smothiness or mist in the air. Drake on ~~Sto~~ says this generally precedes a sickly season in the Delaware State.

~~The same sta~~ a sickly calm attended the Epidemic of 1793 in Philadelphia. A similar state of the air is described by ~~Dr~~ Bayard during the last plague in London. His words are "There was a general calm & serenity of weather, As if wind & rain had been banished from the realm. I could not observe the least breath of air to stir a fane, or weather cock. Fires with great difficulty were made to burn, & the very birds would pant for breath more

v Diemenbroeks facts – see Abrabrose Parey's 100
p. 3 of fevers in 1798.
predict as of Comets & eclipses
fevers.

especially kites & crows who were observed to fly more heavily than at other times."

4 ~~It has been preceded, by~~ They appear in unusual numbers, mortality among many birds & brutes, more especially wild pigeons & cats.

5 The common house fly has disappeared from our cities, ~~& become more objects of note appeared in cities~~, & mosquitoes have been multiplied, & some new insects have appeared, not before, or during the prevalence of our late malignant Epidemic.

6 ~~The leaves of~~ Certain trees have emitted an unusual smell, and of the leaves of these have fallen prematurely, and the ~~fruits plantations~~ fruits have been less in size, or of an inferior quality in the summer previous to several of our malignant Autumnal fevers.

7 ~~The~~ Dr Oliver has taken notice of ~~a change from~~ the paint ~~to a dark color in~~ white upon the boats in the harbour of Boston being changed to a dark color during the prevalence of the malignant bilious fever in Boston in the year

V fatigue, sweats from light exertions -- hands when cut bleed emitting smell like Hep. Sulph: - ~~some~~ absence of burning from wine in the mouth -

The signs of the presence of exhalations ~~in the~~ in the human body ~~human body~~ which produce a yellow fever are as follow.

1 A sudden cessation of an old, or chronic disease, or a conversion of a periodical into a continual disease. ~~It sometimes~~ Of this there were many instances in Philad^a in 7^br year 1793.

2 The breaking out of old sores, or of fresh eruptions upon different parts of the body. the prickly heat & little rashes are the effects of the de

I have observed

3 The head ache, ~~or~~ a decay or increase of appetite, ~~or~~ costiveness, a diminished, or increased secretion of urine, constant sweats, & sometimes of a fatid nature or a dry skin, wakefulness, or a disposition to early & preternaturally frequent pulse

sleep – unusual vivacity, or depression of spirits yellow color in the face – a red, or yellow eye – V ~~have all been observed~~ in persons who were exposed to the exhalation of our annual Epidemics, and who ~~did~~ were not confined, & who could not believe they were predisposed by any of those symptoms to the disease.

v ~~Instances~~ where flight is practicable it should be resorted to in every case. The heights of Germantown & Darby have for many years afforded a secure retreat to the citizens of Philadelphia from their late annual Epidemic. ~~During the western Belt of the city~~ In quitting a place infected by ~~foul air~~ morbid air, care should be taken ~~not~~ to expose the body to great ~~heat~~ cold, or fatigue, for ~~the~~ where the system is taxed with it the least exciting cause ~~often~~ renders it into action effectual by inducing the disease, ~~and~~ & ~~sometimes~~ death, where safety was sought. But where flight is impracticable, or inconvenient ~~a~~ safety should be sought for in such means as reduce the ~~[illegible]~~ the tone & strength of the system. These are of a debilitating ~~Remedies~~ nature. ~~Thus often~~

The means of preventing the Summer, or Autumnal Disease of our Country come next under our consideration. I shall first mention such as have been most effectual in defending against its most malignant form, and afterwards, take notice of such as are proper in its milder grades. I shall speak of the means proper for Individuals. Then of 2 means to defend whole communities.

~~1 In the diet should consist chiefly~~

1 Of the means proper for Individuals. V

The System when impregnated with miasmata is under the influence of a preternatural stimulus, and from the suppression of customary excretions is often in a plethoric state. The prophylactic remedies should therefore be such as are calculated to lessen this stimulus, & to obviate the preternatural fullness of the bloodvessels.

~~They Diet~~ ~~The first remedy for this purpose~~

1. is a spare diet, ~~conformed~~ accommodated to the greater or less ~~degree~~ exposure of the body to the action of miasmata & to the greater or less degree of labor, or exercise which are taken. ~~In the~~

V The Brahmins who live wholly upon vegetables, escape the malignant fevers of India, while the Europeans who eat animal food die in regiments around them. People in Minorca who live much upon gardens ~~[illegible]~~ & eat plenty of fruit escape the fevers of the Island. The field negroes of South Carolina owe their exemption from the bilious fevers of that State to the ~~fa~~ same cause, while their masters often die, or suffer with it. Or low diet acts in two ways. ~~It~~ not only lessens the quantity of blood, & the force of circulation upon the blood vessels, but it induces ~~also~~ such a ~~debility~~ upon the system, as disposes it to vibrate more readily under the impression of the miasmata - thus the willow ~~bends before~~ rises, after bending ~~a breeze~~ before a blast of ~~to the~~ wind, while the embowing oak is torn up by the roots. It is from this ~~influence of~~ vibratility in the systems of women in the West Indies, ~~are~~ ~~acquired by their temperance~~ that they escape the endemic fevers of ~~that~~ the Islands. The

~~In year 1793 I lived for nearly 3 months wholly upon with vegetables tea & Coffee with a small quantity of~~ with vegetables, but I ~~D~~ for cases of great ex-posure to an ~~impure~~ infected atmosphere ~~the~~ with but little exercise, the diet should be simple in its quality, & small in its quantity. a little salted ~~fish~~ meat also a little cayenne pepper when taken with ~~with~~ vegetables, ~~prevents the stomach & also a small quantity of the Cayenne pepper~~ prevents an undue languor of the stomach from a want of its customary stimulants. Where the body is ~~L~~ but little exposed to foul air, ~~&c~~ and much exercise taken, Broths, & a little wine, or malt liquors may be used with the fruits & garden vegetables of the season with advantage. ~~In diet~~ The change from a full to a low diet should be made gradually. ~~when~~ when made suddenly it ~~accumulates & to formidable~~ increases the predisposition to disease by accumulating the excitability of

more than protestants from it in plague. Howard. also in 1793.

r also by fires.

fire de

the system. ~~Long fasting to be avoided, it has not suff~~
a 2d depleting remedy is gently cathartic medicines.
~~2: gently cathartic medicines have been found~~
effectual in many instances in preserving the
body from the an attack of malignant Disease.
Hundreds in Philadelphia owed their lives to
the occasional use of a ~~teaspoonful~~ of calomel,
pills, a few grains of Rhubarb, ~~the~~ or a spoonful
of Castor Oil during the Sickness of 1793
a 3. ~~The [illegible] of the~~ Blood ~~[illegible]~~ ~~and the predisposing~~ ~~cause~~
depleting ~~prevention~~ ~~consists~~ in keeping up a con-
~~[illegible]~~ ~~[illegible]~~ perspiration, or rather a moderate degree
-stant ~~perspiration's~~ ~~discharge from the pores~~
of heat by means of warm clothing, and
hot Clothes. The ~~discharge~~ excretion which takes place by
the skin is a discharge of the first necessity. I
never knew an instance of a person being at-
-tacked by our malignant fever in whom this discharge
was constant, and equably diffused all over
the body. ~~It~~ Its effects have been equally salu-
-ry in preventing the plague. ~~[illegible]~~ So well known

v upon the System as disposes it to vibrate more readily under the impression of the miasmata. Thus the Willow rises after bowing before a blast of Wind, while the unbending Oak is torn up by the roots. It is from this vibratility of the Systems of women in the West Indies, that they escape the endemic fevers of the Islands.

is this fact, that Mr Volney tells us in his trav=
=vels ~~into Spain~~, that the common salutation du=
=ring the prevalence of the Plague, is - not how do
you - "But do you sweat freely"?
a 4th of depleting is Bloodletting. Dr Mitchell in
a manuscript Act of the yellow fever which pre=
=vailed in Virginia in the year informs us that
it was often prevented in persons who were predispo=
=sed to it by the loss of a few Ounces of blood. ~~The~~
~~The French to~~ It was formerly a practice among the Physicians
~~the French Islands~~ St Domingo to bleed their troops as soon
as they ~~received aboard~~ arrived from France, ~~and~~ by which means
they were preserved from the malignant Disease
of the Island.

These remedies whether used separately, or to=
=gether induce such an artificial debility ~~to prevent~~
~~the passage of~~

2nd II: Class of preventives of malignant fevers
are such as ~~prevent~~ obviate the action of Miasmata
~~and~~ by exciting a ~~contrary~~ general or partial inflammation to
action ~~in the~~

the external surface of the body. 28
~~System~~. These are

~~Three~~
1 The warm Bath. I have known this grateful remedy used with success in our city. It serves the double purpose of keeping the pores open by the descending ~~the~~ keeping the skin clean, as well as ~~keeping~~ ~~[illegible]~~ what are called the ~~[illegible]~~ vital organs from disease by ~~[illegible]~~ inviting its predisposing cause to the ~~[illegible]~~ ~~the~~ external surface of the body. 2dly washing the body with salt water every morning & evening ~~[illegible]~~ has had the same salutary effects ~~[illegible]~~ in the West India Islands. ~~[illegible]~~

~~The [illegible]~~ ~~The application of oil to the body~~ ~~[illegible]~~ Anointing the body with 3 ~~has~~ ~~I have not [illegible] to include~~ oil ~~when~~ has been used with success in ~~applied to the body among the [illegible] of~~ producing a ~~an [illegible]~~ centrifugal determination of the fluids. - The natives of Africa use it with advantage dressing their sickly seasons. It has lately been used great ~~[illegible]~~ effects in ~~the [illegible] stage of~~ preventing the plague. Its efficacy was suggested first by ~~[illegible]~~ Oilman

v 4

Dr Baynard has left it upon record that those persons who lived in ~~water~~ water mills, also water men — Bargemen & fishermen or in dabbling in cold water who were employed on the river were rarely infected with it by the plague of 1665, and that but two persons died on London Bridge. ~~with it the~~ ~~we Dr are~~ ~~reasons given by the Dr~~ ~~supposes that the water in all those diseases and the salutary effects of the water disease our~~ ~~notice. Its cause acts in~~ ~~vol. 224~~ The Ablutions enjoined by the Jewish & mahomed religions, serve the same sanitary purpose. ~~Divine says people who dabble much in water escape it~~ ~~Cleanliness in linen it to be advised.~~

having died ~~during~~ of it during four years in which time 100,000 perished with it in Egypt alone. Olivier says - the Better men are equally fortunate in escaping it.

4 The Cold Bath, or Cold water applied to the ~~total~~ external surface of the body. Ulloa tells us in his travels through Cuba, that the Spaniards make it a practice when partially wetted by the rain to plunge themselves with their wet cloaths on into the first stream of water they meet with afterwards, ~~with~~ by which means they avoid taking the fever of the Island. ~~African tribes have been informed~~ ~~The~~ ~~African tribes have been~~ ~~informed~~ The natives at Cairo whose cloaths, & skin are always wet, Mr Volney says ~~generally wet and in a constant~~ uniformly escape the plague. Dr Chisholm informs us that those negroes in Demerara, who go naked, and are thereby ~~exposed to the~~ disposed to avoid rain, & ~~the~~ water, ~~of the~~ are never affected with the fever of that Country. Does the ~~wet~~ cold water in these Cases act only by producing reaction in the System, & thereby fortify it against the

impression of ~~fabric~~ pestilential miasmata? or does the water ~~destroy them~~ prevent their morbid effects by simply washing them from the body — or does it destroy their activity by mixture, or dilution? — Let ~~time~~ future observations & experiments answer these questions.

5th Issues, setons ~~&c~~ & Blisters ~~have been~~ belong to this class of preventives of malignant fevers. See Shaw's Med. vol. 3 p. 124 Dr Hodges ~~defends~~ was preserved from the plague in 1665 by a constant discharge from ~~a blister~~ an issue in his leg. Another person who owed his preservation to the same means, used to say he could always tell when ~~he was with~~ in the ~~the~~ any of the company he happened to meet, ~~in~~ was infected with the seeds of the plague by feeling from their breath, ~~an~~ a burning pain in his ~~ip~~ artificial sore. Dr Gallaher ascribed his escape from the Epidemic of 1799 to a perpetual blister ~~be kept open upon~~ which he applied to his arm for that purpose. Dr Barton favoured me ~~Dr Beach was~~ ~~in a letter from Dr~~

with the light of letters from Dr James Stevens,
Dated Jan 12. 1804.
in which he says, that Dr Beach had been
informed by
notified from ~~on~~ the bilious fever by an letter
in his side ~~without the Doctor had for addition~~
~~to this fact he adds~~ He adds further, that Dr
Beach had been called to attend ~~100~~ the labourers at
Onondaga in the state of New York out of 100
the Salt springs, ~~of which~~ 98 of whom had
the bilious fever. Of the two who escaped it,
one had a sore leg, the other a ~~wounding wound~~ scalded hand.
~~from her~~ The discharge from these sores, as
well as from the Doctor's issue was more lo-
-pious during the prevalence of the fever, than
they had been at any other time. —

A III Class of preventives of malignant fever
are such as excite a general action, ~~either~~ more
powerful than ~~to that~~ which
~~of a contrary nature~~
~~to~~ the emanations are disposed to create in the
System, or of a contrary nature.

These are 1: ~~wine and more spirits garlic.~~
~~1.~~ Onions & Garlic.
~~No~~ There was not a single person affected by

the malignant fever in 1793 who used of these vegetables in his diet. The escape of several thousand french citizens who com=posed part of the inhabitants of our city in that year, was ascribed in part to their liberal use of these ~~article~~ condiments in their food. The Jews, it has been often been said, have owed their preservation to it from the plagues of Europe. It is probable the Leeks & onions ~~in~~ were ~~was~~ introduced there ~~general use~~ of ~~this Egypt~~ ~~was in general use~~ ~~general use~~ into Egypt as the means of ob=viating the plagues of that country. I have been at a loss to know why the Author of nature who has endowed these vegetables with so many excellent qualities for diet & medicine, should have accompanied them with such a disagreeable smell. Perhaps the reason was kindly to force it into universal use, for it is remarkable, ~~that~~ their ~~Smell of it~~ smell is imperceptible to those who

✓ The air extricated from fermenting wines,
during a plentiful vintage once checked the
ravages of a plague in Germany — tempts
by Salamander ~~[illegible]~~!
2 ∓ small doses of Calomel taken so as gently to
affect the ~~mouth~~ breath or gums, have in several instances
prevented attacks of ~~an~~ Epidemic malig^t fevers. It
preserved the Crew of a Russian Ship at Plymouth
in the year 1771 from a fever generated by filth in
her hold. In a letter which I rec^d from Capt Fenton
in the year 1797, he informed me ~~that at Batavia~~
a old & respectable merchant ~~at Batavia~~ had assured him he had
been preserved by ~~it~~ it ~~among the~~ in good health above 30 years in
~~the E. I. Batavia~~, a place where according to Sir Geo. Staunton
half the new comers die every year of malignant fevers.

use them. ~~Under this head it~~ ‡ 2dly

2 Certain ~~Gas~~ matter which act powerful upon the sense of smelling ~~have been found to~~ belong to this class of preventives of malignant fevers. Mr Bruce & Dr Clark ascribe great virtues to the smoke of Coal & wood for this purpose. The smell of tar defended the Ship wrights from the plague of 1665 in London. The Island of Ternate says Mr Boyle ~~was healthy~~ was celebrated for its healthiness before the trees which ~~produced the~~ close clove exhaled a constant odor through it, were destroyed. Even fetid odors have ~~produced~~ acted as the same salutary effect. Of this Rumbow Percy relates a remarkable fact. He says a plague was once checked ~~by~~ in a city of Italy by killing a large number of all the cats & dogs, & suffering them to exhale their ~~putrid~~ fator in the streets. ~~I have said~~ how do they all act? 1. 2. 3dly.

~~these~~

3 Spirits & wine have ~~often~~ been resorted to as preventives of pestilence, but I believe they have ~~proved more~~ generally ~~been hurtful~~ increased, instead of lessening the predisposition

of the body to an attack of the disease, by ~~exca~~
~~ing a~~ ~~bodo~~ They are effectual, ~~their stimulous fr~~
~~be constant, and to~~ only when they produce
constant intoxication, for disease & death
are the certain consequence of that ~~debility~~ state of
weakness & excitability which succeed the
~~least interval~~ excessive & intemperate use of
these liquors. I have known three instances
of ~~persons who be were habitual~~ Drunkards
surviving ~~one~~ two of our most fatal Epidemics
~~who are constantly exposed to this~~ but
neither of them was sober a single hour
during the six weeks they prevailed in our
city. nor in any of the ways in wh it is used,
4th Tobacco ~~has sometimes been used~~ has found
to be any more useful that Ardents spirits during
in preventing malignant disease. Dr Howard
says no benefit was derived from it in the plague,
and many hundred of our citizens can bear
witness of its ineffectual use in guarding against
the ~~yellow~~ destructive malignant Epidemics of our
city.

5th Camphor ~~by~~ suspended in a bag round the neck, and Rags wetted with Vinegar applied freely to the nose afforded no ~~some~~ safety from the malig.t fever of 1793 ~~than~~ ~~tobacco~~. It is probable they ~~by~~ encreased the predisposition to it by ~~affording a vehicle in~~ entangling more ~~any~~ ~~their~~ ~~Vapour fine~~ volatile ~~putrescible~~ particles ~~to the~~ morbid ~~of the~~ miasmata ~~which produced the disease~~ or things ~~in~~ some ~~them~~ instances encreased the predisposition to the disease.

Class

IV Among the preventives of malignant fevers, certain substances have been recommended w.h it is said destroys ~~the~~ miasmata ~~which produce~~ in by entering into mixture with them. Two persons who ~~took a table spoonful of sweet oil~~ were constantly exposed to the fever of 1798 ~~escaped the it~~ took each a table spoonful of sweet oil every morning ~~to which they ascribed~~ They both escaped the fever. ~~If~~ Did the oil in this case act by destroying the miasmata in the stomach ~~in which they appear to~~ chemically or did it defend the stomach mechanically from their action? Or did it prevent the

disease only by keeping the bowels gently open? It is certain the fat of pork protects the ~~bowels & bowels of the~~ men who work in the lead mines in Britain from the deleterious effects ~~of~~ which the fumes of lead, & that metal are so apt to bring upon the stomach & bowels, ~~and it is certain~~. A poisoned arrow will not injure a hog, if it be anointed by the fat which lines his sides. Dr Remsay's fat. ~~said formerly~~ ~~that sweet oil~~ I said formerly that the application of sweet oil to the body has lately become a popular ~~remedy for~~ mode of preventing the ~~Asiatic~~ ~~a fever~~ plague, & that many thousand persons who ~~dealt in~~ handled it as an article of merchandise, had escaped that disease during four years of its prevalence in Egypt. ~~It~~ Possibly the effluvia emitted by the oil, by mixing with the miasmata may have aided its good effects in preventing the disease.

2 The vapor which issues from fresh Tanth

V Tubs of water in which swims in
fever of 1797. see page 121 vol. 5.
Bathing in salt water. mor: Bartram
hull of the goat — Chapitz. Sale
Am: 2 nuffe
Long interval between strong
& predisp.d causes & an attack.

has been supposed ~~to~~ destroy the miasmata which produce malignant fevers by entering into mixture with it. ~~Many~~ Most of the persons who were employed in ~~cleaning~~ removing the dirt from the streets of Philad^a also in digging cellars & graves in ~~the year~~ 1793 escaped the fevers of that year. In the new settlements of our country it is said the poison of ~~a~~ the Rattlesnake is ~~discomfited~~ deprived of its deadly effects upon the body by ~~thrusting~~ thrusting the wounded limb into a hole in the fresh earth. The fable of Antaeus ~~is said to~~ who rose ~~more~~ ~~vigorous~~ with renewed strength from the ground ~~as often~~ after an wo falls, ~~w~~ was probably intended to signify among other things, the ~~wo~~ healing salutary virtues contained in the ~~from~~ ~~the~~ ~~the fresh~~ clods ~~coils~~ of earth which lie immediately below its surface. V

In addition to all the ~~pa~~ modes of obviating an attack of malignant fevers when exposed to ~~that~~ remains that I mention, the avoiding V all its exciting causes. ~~There~~ are great heat,

has been said of the effects of fear
v much ~~of fear~~. The absence of it is no protec-
=tion, ~~no more than it is from a bullet in~~
or the city of Philad^a would not continue even
at this Day to deplore the loss of her intrepid Patriots & her
Pennington & her Wayne & her Cooper & many other of her
citizens who ~~were strangers to fear, & who~~ have fallen in the successive Epidemics
of our city.

~~I have said nothing of avoiding all intercourse~~

+ In large families w^ch ~~were~~ are affected by the
fever, ~~the~~ a maid is often the only person
who dies wch owing to her being pred^d by ~~the~~ excessive
~~debility by~~ the ~~labor~~ ~~of attending the~~ ~~to which~~
~~the~~ ~~which is obliged to perform~~ is a more
~~the~~ ~~the is exposed in~~
malign^t attack of the disease than those
~~who been~~ branches of y^e family who survive
her.

fatigue more especially from
and cold, labor or ~~exercise~~ not of an habitual
relinquishment of former employment
nature. The miasmata which produce ma=
lignant fevers often ~~sleep~~ exist in an inoffensive
~~spoken~~ state in the body for weeks or months, and
pass out of it without doing any harm. Unlike
the seeds of contagious diseases, they ~~generally~~ require,
with but few exceptions, an exciting cause
to rouse them into action. These causes are
1 heat, 2 cold, 3 fatigue more especially from un=
4 fasting + 5 intemperance in
=usual labor or exercise — intemperance in
eating & drinking, and 6 intemperance in the use of non alimentary drinks, &
passions of the mind. The degree of caution with
which these exciting causes should be avoided, &c.
be regulated by the quantity, and debility of the
miasmata which disposes themselves in the
~~which have been last spoken of in the~~
by the signs of their presence in uncertain quantities which are of a
body. ~~There are~~ In epidemics ~~of a accidental~~ of a less reduced
moderate degree of malignity, ~~but little~~ change
~~should~~ will be necessary ~~to~~ in the manner of
living, than in those which are malignant
in the highest degree. In the latter, no new

V wth a voice so loud from the waters of St Croix, to
I wished to speak ~~so that the in~~ as to be heard ~~by the whole~~
the shores of the Missisippi, – citizens of U States not
~~United~~ States I would say ~~not~~ Beware of contagion
– for the malig fevers of our country are not propagated by
~~contagion~~ it – nor shd I say, Beware of putrid exhalations
where the duties of humy or consanguinity requiring or:
attendance upon the sick – But Beware – Beware of the exciting
causes ~~due~~ wch have been mentd during the prevalence of
all ~~the~~ general for one
of ~~our~~ summer & autumnal disease. —

‡ I have said nothing of avoiding all intercourse with the sick in order to prevent the disease, because ~~I do not~~ it is not propagated by contagion. In places not infected by morbid atmosphere ~~it may~~ the most laborious offices of humanity may be performed to the sick, & in places wch are so, the sick may be visited, & even attended with safety by yr friends, provided they avoid the exciting causes of the disease before mentd:

aliment should be tasted, and even customary
acts of labor & business should be suspended.
The inhabitants of Constantinople & Smyrna
erroneously suppose they escape the contagion of
the plague by shutting themselves up in their
houses during its prevalence, but
they owe their safety wholly to their being re-
moved by rest, & a total exemption
from care & business from all its exciting
causes. Confinement is more certain in its only
effects when persons occupy the upper stories
of their houses. The inhabitants of St.
Lucia Dr Chisholm says by this means often
escape the bilious yellow fever of that Island.
Such is the difference in the healthiness
of the air between the upper & lower
stories of a house, that birds live in the
former, & die in the latter, during the prevalence
of a plague in the Eastern Countries. June 20
impressed with a sense of the general necessity of the
cooperation of exciting causes to produce the malignant
fever of our country that if

* Or in other words by <u>living above it</u>. I advised ~~=~~ bending to the storm of malignant fevers, in order to suffer them quietly to ~~Wild Autumnal fevers~~ pass over the system. Wild Autumnal fevers should be opposed by means which enable the system to strike its roots deeper into the earth, & thus to prevent its ~~being~~ ~~bending~~ being torn ~~upon the roots~~ by ~~or~~ bending before them. The ~~Preventives~~ preventatives for this purpose should be —

* Dr Blane says the soldiers in the British army who were all taken prisoners were less subject to intermittent fevers than the native country people. & it is well known the American army were much less afflicted with ~~fevers~~ intermittent fevers after ~~you~~ they exchange ~~Rattio~~ fresh for salted rations of beef & pork.

Dr Dow & B Humboldt found of Chuan & Mr Mexican air Been checked by nature by frequent heavy ~~rain~~ rains & change of wind. Dr Jackson. Vol: V of med. Eng: p: 19.

In the mild grades of the Summer Intermittent fevers of the United States, the means of prevention are different from those which are proper to prevent its in its malignant forms. The latter - below it - They consist of such things as gently invigorate the System, & thus create an action superior to that to which the Body is ~~poisoned~~ exposed by the miasmata which ~~which~~ have been imbibed. ~~in other words~~ ~~They creating a living fabric. The one bending to the from the other bending & forming~~ ~~Compared to drying it by opening it~~

I cordial Bit & Drinks, consisting of salted meat and fish, with a moderate quantity of wine, or malt liquors. Spirits shd be used cautiously, for when used long enough to do good - they create by a habit ~~of~~ a dangerous attachment to ~~them~~ them. A strong infusion of any bitter herb in water taken upon an empty stomach is a cheap & excellent substitute for all the above liquors, where they cannot be ~~aff~~ afforded. ~~water so healthy~~ ~~that~~ The late Prof. Gregory used to tell his pupils that out of 25 ~~English students~~ young English men who were his fellow students at the University of Leyden

Dr Lind tells us

The farmers of Holdernes, ~~not long lived~~ who
were accustomed out early to their work, were
rarely long lived, probably from inhaling
miasmata with the morning air.

the exciting causes of fever formerly
3 + all ~~great mentions~~ ~~should be~~ mentioned should be avoided with uncommon
care ~~in~~ 3 days before & 3 days after the full &
change of the moon.

among whom was the late John Wilkes, ~~from during~~ twenty four of them escaped an Epidemic intermittent upon inquiry it was found while the only one ~~some~~ they all drank wine daily. ~~The only One who was~~ One of them only was affected by an Epidemic Intermittent which prevailed in the town. He drank water only = ~~the~~ = twenty four of them escaped an Epidemic intermittent which prevailed in the town, ~~they all~~ drank wine daily, the only one of their number who was affected by ~~it~~ the fever drank nothing but water. Bark ~~daily~~ has sometimes been taken daily with advantage as a preventive of the mild ~~In addition to~~ with these cordial articles of diet & medicine, ~~&~~ drinks perspiration should be kept up by ~~warm~~ warm clothing. - the early morning, & the evening dis ~~ing~~ should be avoided. Fires should be kindled in cool & damp weathers, ~~and~~ also in the mornings & evenings in common sitting rooms. ~~and~~ By these means thousands have been preserved from mild remitting and intermittent & chronic fevers in the most sickly seasons, and countries. +

The intestinal state of our human bowels &c

Mr Duvar tells us

The French Soldiers ~~who~~ while in Egypt, carried pepper boxes with them to eat with the fruits of the Country wherever they went, and thereby escaped the diseases of the Country.

disease - requires ~~[illegible]~~ several spec-
-fic means to prevent them, different from those
which are proper to defend the blood vessels from it.
Unripe, and decayed fruit should be avoided while
that ~~the~~ which is ripe & sound should not be
eaten ~~[illegible]~~ in an excessive quantity. Spices & particularly
Cayenne pepper & the red peppers of our Country
should be taken ~~with the~~ daily with food, as some
days the inhabitants of the Country visited made it a practice
~~to~~ in the season of bowels complaints to eat
pepper in such quantities as to excoriate their
throats ~~with it~~. The whole diet should at such
times be of a cordial nature. A Dysentery ~~was de-~~ severely
-scribed a few years ago ~~to prevail only in the high~~
of Georgetown in Maryland ~~[illegible]~~ only among ~~[illegible]~~ confined
~~only to~~ protestant families. The ~~members of the~~
Catholics who ~~lived on~~ in conformity to the
of the Canons of this Church ~~lived eat~~ eat wholly or some-
-times often of salted fish ~~[illegible]~~ very generally
escaped it. In the year 1764 ~~while I was in Boston~~ a Dysentery broke

V It was Once prevented in all the boys of the Bordentown Academy while it was epidemic in that town, by giving them Molasses in large quantities in their Diet & Drinks. It probably acted only as a purge.

out in the Village of Princeton & affected many of the Students of the College. ~~It was~~ It was remarkable it passed by all those boys who came from the cities of Philad^a & New York. This was ascribed to their habits of living ~~upon~~ more upon tea & coffee than the ~~more cordial diet~~ farmers sons for those articles of diet were ~~then~~ but rarely used in 45 years ago in the farm houses ~~of the~~ of the United States of America. ~~country~~. It is probably to ~~their~~ the more cordial nature of the diet of the inhabitants of our cities than of Country places, that the Dysentery is so ~~rare a~~ rarely prevails in them. I have never seen it Epidemic in Philad^a. —

The other means of preventing the Dysentery is to avoid Costiveness, & to cleanse the bowels when they are in a natural state. ~~It is generally resorted in~~ ~~by it~~. A Captain of the militia of Pennsylvania preserved his whole company from a Dysentery which prevailed in a sort of the American Army at Amboy in 1776 by giving each of them a purge of Salt Water. He preserved his family & many of his neighbours some years afterwards from the same disease by dividing among them a few pounds of Glauber Salts. V

~~500 persons~~

V2 ~~The plague day~~ Pinchas destroys 500 persons life, the
Day after ~~the~~ Nile completely overflows its ancient bounds,
than it does the day before. ✝ In the matters which
~~This was done with boats by Empedocles by~~
produce ~~rocky fumes~~ theyn may be washed away by ~~large~~
streams of water? Empedocles checked the plague
at Selinis by pouring the streams of two neighbouring
rivers upon the filth which produced it. V Pinchas
tells us ~~the plague~~ ~~destroys~~ that 500 people die, lefs, the
day after the Nile completely overflows the
grounds which emits putrid exhalations than
Died the day before. see above ✝

as the Dysentery is often excited by the damp or moist of the night air, great care shd be taken to avoid it, or to defend the bowels when exposed to it, to defend the bowels by more warmth, than other parts of the body. The Egyptian bandage or belt shd be used for this purpose.

II. I come now according to the Order proposed, to mention the means of preserving whole cities, or communities from the influence of those morbid exhalations which produce the malig.t forms of the summer & autumnal disease of y.e United States.

As the flight of a whole city is rarely practicable, it will be necessary to seek for the means of destroying the morbid miasmata.

1 where the putrid matters which emit them are limited of a small extent they may be covered with earth or water. During the prevalence of a malig.t fever it will be unsafe to remove filthy matters. A plague was generated by an attempt to clean the filth which had accumulated

V by means of mixture, or by creating
a new action in the System. The Air
extricated from fermenting Wines during
a plentiful Vintage is said once to have
checked the ravages of a plague in Genoa:
Ambroze Parey ~~The offensive bro~~ says the plague was
=wy. Once checked ~~by~~ in a city in Italy by killing
all the Cats & Dogs in the place, & suffering
them to putrify in the Streets. The yellow fever
has never appeared in the Salt-Bituminous
marshy ~~area~~ the this city, & rarely in the
vicinity of ~~the~~ the pitts in its Suburbs — perhaps
from the effluvia emitted by them. It
has been said that the plague has never visited
London since the ~~Sea~~ use of Sea Coal for fuel.
It is possible its smoke may have been useful,
but other Causes have contributed to prevent it, former=
=ly mentioned. —

on the banks of the waters which surround the city of Mantua during the summer & autumnal months. even a shower of rain by disturbing a pellicle which sometimes is formed over ~~putrid~~ putrid matters, has ~~let~~ more than once let loose ~~so~~ exhalations that ~~the~~ have produced a pestilential disease.

2 Lime has been found to be a powerful antidote to ~~prevent~~ the Air extricated by putrefaction. It has often been thrown into privies with obvious advantage in sickly seasons. How far it might be employed to destroy the foul Air of Docks, Ships, Cellars & Common Sewers ~~now~~ remains yet to be determined by future experiments.

3 Impregnating the Air ~~with~~ with certain effluvia which acts ~~in~~ either by destroying miasmata, V

4 Mr Morveau has lately proposed the muriatic Gas as a means of destroying miasmata. However effectual this & the nitrous Gas may be in

V of preventing pestilential diseases. His
name Sake Varro a Roman general was
exposed with a large fleet & army at Cory:
-ra to a malignant fever. He discovered the
cause of the miasmata which produced it.
to be from the South. - in consequence of
which he fastened up all the Southern
windows & doors of the houses in which
his troops were quartered, & opened new ones
to the north, by which means he preserved
his troops from the fever which prevailed
in all the other houses of the neighbourhood.
Mr Howard advises keeping the doors & windows
of houses exposed to the plague, constantly shut,
~~during~~ except during the period of sunshine.

destroying the foul Air generated by, & discharged from the human body in confined & filthy situations, neither of them is calculated to oppose the feeds of a disease which exist in the external Atmosphere & spread over a large extent of a country or Country. In Provence indeed tells his his Associates Gas checked the late malignant fever of 1801 at Cadiz - ~~but in~~ To refute ~~To but it~~ It was used ~~Dur~~ late in the season, at which time ~~it had~~ it is much more probable the Disease was destroyed as it is in all other Countries in middle latitudes, by cold weather. Tubs of water in 1797.

5 Varro in his ~~treatise~~ upon agriculture mentions a "curious fact upon the means of the explosion of gun powder has been proposed to change the state of the Atmosphere, but no benefit has ever been derived from it.

~~The~~ Large fires have been made in the streets of Cities ~~have been made in~~ not for the same purpose, but without ~~producing~~ producing any good effects. ~~They do not do~~ ~~any~~ They were hurtful in the ~~past~~ last plague of 1865 in

+ Interposing Rivers - Water &c.

V ~~Dwell~~ In the Character given by Luther of Pope Julius, he ~~ascribes as~~ says "he kept the Streets of Rome, so clean & sweet, that there ~~was~~ were no plagues, nor sickness during his time"!

~~Rome during the time of Pope Julius 2nd?~~

~~see Luther~~ —

who relates this fact, says "heaven
London. "~~Heaven says~~ Dr Hodges, not for the mistake
of ~~the citizens~~ kindling them, & mercifully, put
them out, with showers of rain". +

III We come now in the last place to mention
the means of exterminating the ~~a pest~~ Summer & Autumn
disease ~~of our country~~ by removing its causes.

~~Hence~~ These means are

1 The removal of all those ~~animal & vegetable~~ sources of putrid
& unhealthy exhalations ~~from~~ formerly found from
~~marshes from~~ our cities which are capable of
giving, ~~particularly the filth~~ ~~marshes in~~ ~~Holland~~ ~~Dutch-towns~~
~~and particularly the cities of Holland~~ ~~and the~~
& ships, from ~~which diseases arise~~ more than any fish &c.
the theatre of disease, have become healthy by these
means. ~~The~~ Many of the institutions of the Jewish nation
~~seemed~~ for removing filth of all kinds from
camps & ~~preserving clean camps & healthy~~ in this
cities are well worthy of our notice & imitation,
for moses the ~~an~~ ~~illustrious~~ enlightened author of them was
a firm believer in the Domestic Origin of pestilen-
-tial diseases. "Holland & the provinces of Holland & their exemption from
the plague, only by the cause of their cleanliness.
The city of Oxford ~~who was~~ was preserved to ~~escaped the plague~~
~~which escaped London & many~~ ~~other~~ parts of

which had been ~~visited~~ afflicted nearly every year for above half a century, ~~has ceased~~ by the plague has

England ~~in the year 1665 to so as~~ to afford an asylum to the ~~world~~ Royal family of ~~the~~ G. Britain ~~and~~ from ~~the~~ plague which ravaged London & many other parts of Eng. in the year 1665 ~~only in the year 1665~~ only in consequence of its being been ~~recently~~ cleansed some years before by the Bishop of Winchester

2 In the construction of ~~our~~ cities, ~~the~~ narrow streets & alleys should be carefully avoided. ~~a large~~ Dup ~~lots~~ ~~frame~~ should be left for a yard, or garden for every house, & subterraneous channels should be made to carry off the contents of the houses & a great advantage would arise, could cities be built so as to leave vacant squares between ~~equal to those~~ equal in number & size to those which were covered with houses. ~~perhaps~~ ~~they straight~~ ~~the~~ the light & dark squares of a Checker board ~~would~~ might serve as ~~a~~ models for ~~each town~~ the extention of such a plan for ~~a city~~ all cities which are to contain more than 5,000 people. The city of London ~~has~~ never been visited by ~~the plague since~~ it since ~~the destruction of the~~ ~~been closed ever since~~ ~~building in~~ by fire the year 1666. Heaven ~~seems~~ as if appeased by the sufferings of ~~that~~ her ~~citizens of London~~ ~~the year before~~ citizens

V

I have met with many excellent quotations from a work upon this part of our subject by Lorzetti a physician of Italy from which I have no doubt much useful information might be obtained. The Revd. Thos. Hall a Gentleman at Leghorn to whom I made an unsuccessful application for this work speaks of it in his answer to my letter in the following terms. "~~Lorzetti has~~ "It is in such high estimation that the late Emperor Leopold when grand Duke of Tuscany caused it to be reprinted at his own expense, & presented it to his friends. The ~~large~~ consequence of this, was it influenced the proprietors of low, marshy lands in the neighbourhood of the River Arno to drain & cultivate them, and thereby rendered ~~them~~ the abode of noxious ~~inhabitable~~ air, and malignant fevers, a terrestrial paradise"

Plague checked by Prof. de

that memorable year,
~~gave that disease, in order to printed out exactly~~
at the time they were venting
~~to their cause, and while they were~~ excavations
upon a marshy
bale of Silks ~~came~~ imported from Holland as the
vehicle of the seeds of the disease, kindly pointed out
& unmasked its cause by permitting a fire to
destroy whole ~~wooden buildings~~ ~~Shots~~ ~~all those~~ of ~~wooden~~ small
wooden buildings which had been
the sources of their calamities. Those Shots
were to London what water Street to Philad.a
Tells boast to Baltimore, ~~the to~~ The Slip to New
York and water Street to the town of Norfolk. —
3 ~~The~~ This the Summer & autumnal diseases of
our country arise from marsh exhalations
they should be ~~drained~~ destroyed by drains, by
wells communicating with their subterraneous
~~perforations~~ in the manner recommended by
Springs,
Dr Anderson, ~~or~~ by ~~cutting trees with the~~ cultivating upon them, certain
grapes which absorb their ~~water~~, ~~&~~ moisture, ~~&~~ when
none of these modes of destroying them is
practicable, by overflowing them with water.
The Summer & autumnal Diseases of our Country
~~by It has been remarked that the Bronchial~~
~~Disease of our country~~ have often followed

the erection of mill dams. ~~It~~ They may easily be prevented by ~~intercepting~~ surrounding ~~the flows of~~ those receptables of water with trees which ~~to divert the sun's action upon~~ prevent the sun acting upon this flows so as to exhale the miasmata from them. ~~Where this cannot be done, a copse of wood should always be put in~~ Trees planted upon the sides of creeks & rivers near a house, serve the same salutary purpose.

It has often been observed that families who spend years in the ~~Cotton~~ swamps of Delaware & N Carolina while they are in ~~y~~ natural state, ~~enjoying good health~~ ~~return of the northern states~~ ~~when they are seized~~ ~~This~~ fact that sickness always follows the action of the rays of the sun upon the moist surface of the earth after they are cleared. For this reason, the cultivation of a country, ~~who~~ and always follow the cutting down of its timber, ~~to~~ in order to prevent the new ground ~~emitting~~

becoming by its exhalations a source of ~~our~~ disease. a law to prohibit Phys: report on death first cases of fever

In speaking of the means of preventing the malignant forms of our ~~our~~ fever, & extend

it may appear strange that I have said nothing of the efficacy of quarantines ~~to disease~~ ~~interfere~~ for that purpose. Where I now ~~addressing~~ ~~standing before~~ an audience composed exclusively of citizens of ~~Philadelphia~~ Pennsylvania, I would do homage to this ~~feeling~~ sentiment in a respectful & melancholy silence, ~~be silent~~ upon this subject, ~~or~~ I would request permission to retire for a few minutes to ~~in~~ ~~Do~~ deplore in secret the evils which ~~the~~ a belief quarantines has done to our country in ~~our country~~ speaking to ~~an~~ gentlemen from ~~of unprejudiced minds~~ But as I am ~~addressing~~ fellow citizens ~~collected from~~ ~~assembly of citizens of~~ other States, ~~and whose~~ ~~minds all the States in the Union~~, ~~I am very~~ ~~sincerely~~ open to ~~a second~~ whose minds are ~~free of prejudice on~~ ~~decisions we get to from upon this subject~~ the dictates of reason, ~~unprejudiced upon this subject~~, I feel myself ~~no~~ quarantines are of ~~they are a malignant~~ no efficacy in preventing ~~the~~ our malignant

to medicine in our Country, & that hundreds who would blush to write in the cry of "great is Diana of Ephesus" are not ashamed to be claim, - "great are the quarantines of all our States!" proceed out brains,

Should I attempt to enumerate all the evils which ~~which~~ this error has introduced into our Country, my lecture would not end with the day. Thousands of our citizens have been carried by it to premature graves. Millions of Dollars have been wasted by its ~~inf~~ fatal influence upon the public mind. By unnecessarily shutting up the ports of foreign Commerce against our Ships, it has impaired our commerce, agriculture & manufactures. But this is not all. The belief in the contagious nature of the yellow fever which is ~~so~~ so solemnly enforced by Quarantines has demoralized our citizens, & in some instances petrified their very hearts.

bilious fevers, in any other way than by excluding the foul air that is generated in the hold of a ship which may be done as easily in a single day as in weeks or months. They originated in error, and have have been kept up for ~~many a~~ many ~~centuries~~ years by a servile & traditional faith in the opinions and conduct of our ancestors in medicine. They do violence to reason & science by ~~disposing~~ rejecting the connection between all the changes which take place ~~both~~ in the animal vegetable & aerial kingdoms, and the existence of pestilence, and thus ~~deprive the~~ render abortive a large portion of the goodness of heaven ~~as~~ to the children of men. In a word, they ~~are the~~ produce all the evils of the fatalism of the Turks under ~~a specious~~ the cover of a popular & imposing name. In contemplating the prevalence of a general ~~prevalence~~ belief in quarantines in the highest & most respectable classes of citizens ~~that~~ we are disposed to believe there has been a ~~exclusion~~ translation of superstition from Religion ✓

~~future ravages of our foes upon the lives of our~~
the ~~depopulation~~ of our cities from the filth
now generating in their bowels - the Distraction ~~decay~~ of our
trade, & the universal poverty, & distress of our country
~~population by the deaths of thousands, our soldiers~~
~~perished~~ from the continuance & ravages of our
~~in public hospitals~~ - and ~~the from the operation~~
Domestic pestilence among us, -
- did not a ray of light break in from the
east to ~~dispel~~ dispel the gloom which such a
~~distressing~~ anticipations are calculated to create.
~~ingress of but~~
Yes - the plague, ~~which has been believed from~~
the source of our ~~and by~~ the offspring
has lately been ~~discovered~~ proved to be ~~a disease of our~~
fever
of domestic exhalations & incapable of being com-
municated by contagion, & of being equally subject to destruction.
Or ~~more important~~
discovery more pregnant with blessings to man-
-kind, has seldom ~~been~~ been made. Its ~~universal~~ universal ~~destruction~~

It ~~[illegible]~~ has extinguished friendships — annihilated religion — and even violated the sacrament of nature by resisting the loud & vehement cries of filial and parental blood.

In contemplating Quot. ~~all~~ the present operation of all the causes which have produced the public & private calamities that have been mentioned, I should feel disposed to retire from your presence, & deplore in secret the future depopulation of our cities, ~~from~~ ~~the filth and generating [illegible]~~ the destruction of our commerce, & the universal poverty & distress of our ~~country~~ citizens from the continuance & increase of all the causes of domestic pestilence among us, — did not a ray of light break in from the last to dispel the gloom which such anticipations are calculated to create — yes the plague, the scourge & terror of our globe, has been proved, like our ~~yellow~~ American yellow fever, to be the

V ~~Consequence of~~ the Physicians & Statesmen philosophers of two great & hostile nations ~~working in it~~ concurring to ~~predominate it over part of the world.~~

V It is impossible to describe all the benefits which await this Atchievement of our science over pestilence upon the affairs of our globe. Large cities will no longer be the hot beds of disease and death. Extensive regions of low and marshy grounds overteeming ==

v abashed by the defeat which he has lately met with from Sennacherib Egypt, –

+ Its influence must be felt in every part of the United States, ~~and~~ for ~~the~~ ~~all the laws which govern the long~~ ~~one pestiferous fever~~ ~~to the generation & extinction of the Pestiferous effect~~ ~~Equally to the~~ ~~one malignant fever~~ is the ~~child~~ of the same ~~parents,~~ causes ~~and~~ which generate the ~~pla~~ Eastern plague, and must submit to the same modes of

offspring of domestic exhalations, ~~and~~ to be in-
capable of being communicated ~~of~~ by Contagion.
and of course, to be subject to destruction. A
discovery more pregnant with blessings to man-
kind, has seldom been made. Its universal
adoption is ensured by the physicians and
philosophers of two great & hostile nations conversing
to disseminate it over every part of the world.
Pyramids of war, the work of successive
ages and nations must fall before it, &
rivers of tears must be Dried up by it.
No wonder death, abashed by the defeat he
has met with from Science in Egypt, has
lately grasped the Sword of War with tenfold
fury, as if Conscious it was the only re-
-maining instrument of the general, and
sudden destruction of the human race.

v = trace of our Autumnal Air, ~~and~~ shall no more be damped by Autumnal sickness. ~~The~~ An accidental ~~existence of a~~ case of bilious fever is generated shall expose the place where it ~~exists~~ to obloquy & disgrace.

only with pestilential exhalations, shall be converted into ~~fertile~~ fruitful fields, and ~~afford pleasant~~ crowned with ~~the pleasant~~ healthy abodes ~~for the children~~ of men. Rosy health and ~~manly strength~~ shall succeed ~~the~~ pale, or sallow countenance ~~of fevers~~ upon the banks ~~of our~~ The ~~inhabitants of the~~ of our creeks & rivers. ~~The nations of the earth should no longer be separated from~~ a powerful source of repulsion between nations shall be removed, and commerce ~~flow~~ shall shake off ~~forever~~ the fetters which have been ~~since~~ ~~cease to fill its wings in~~ under the improved upon it by vexatious & expensive quarantine ~~influence of contagious diseases. Quarantines~~ lazarettos. ~~shall cease to be the vexation~~ ~~evils~~ of necessary ~~vapours, & lazarettos of scoundrels~~ a yellow, or a red eye, ~~in a~~ ~~Diseases. Man~~ ~~The sight of a man in the~~ chilly fit of a fever, shall no longer be a signal for ~~flight and~~ ~~cowardly in~~ ~~in fellow creatures~~ shunning & leaving ~~to~~ a fellow creature to perish ~~without aid~~ alone in a garret or a barn. The number of diseases shall be limited, & the most mortal of them shall be struck out of the list of human evils. It is impossible to hear

of this future ~~hoping~~ ~~change in the condition of our~~
~~globe~~ ~~of the~~ melioration of the physical condition of
man ~~on globe~~ ~~without~~ ~~so~~ without banishing
a hope that some great ~~ope~~ change equally & political
favourable to his moral & intellectual happi-
-ness is about to take place upon our globe.
The hope is strengthened by the similar influence which
~~the~~ the late discovery of vaccination is calculated
to produce upon ~~the~~ the increase & health of the human
species. Even we can safely believe
man ~~here~~ thus
are to be multiplied, ~~beyond all former bounds~~
~~times~~, only to ~~be~~ ~~swell the numbers~~ ~~increase the 2 of slaves~~
~~to denote more especially of the~~ ~~former~~ a more numerous
~~valuable~~ ~~because the~~ afford ~~more~~ ~~valuable~~
subjects ~~people~~ for the miseries which are con-
-nected with the prevailing ~~in~~ ignorance, drive & slavery of
the greatest part of the inhabitants of the world. But
~~But notwithstanding the this prevailing~~
Drops — & falling forced
— the Curtain Drops — ~~which interrupts~~
~~to grief~~
~~from~~ Drawn with reluctance ~~from the~~
~~moments which any attachment to mankind~~

~~had led me~~ — the delightful prospects into futurity, to which my ~~Attachment to~~ aspect for a great & interesting discovery ~~truth~~ had led me. — I have only to say: you first got to ~~the importance of an analogy~~ that ~~it~~ to render ~~it~~, this discovery ~~and all the other reasons of~~ effect extensively & speedily useful, our labors must second the researches of our European brethren. Let us ever recollect that we ~~are~~ are the sentinels of the health & lives of our fellow citizens, and that ~~this~~ higher is a grade of ~~highest~~ merit in ~~our~~ our profession much ~~greater~~ than ~~above~~ that which ~~consists~~ arises from the cure of diseases. It consists in ~~destroying~~ ~~exterminating their causes, & thereby~~ destroying them, by exterminating their causes. —

~~For the attention with wh you have honoured my detail of facts, I beg you to receive my ~~very~~ ~~warmest~~ grateful acknowledgements, for its length, — I beg your forgiveness.~~ For its defects I solicit your candor, and with my best

wishes for the usefulness & prosperity of our society, ~~and for the individual happiness of each~~ my colleagues, ~~this~~ cordial of ~~you~~ — I bid you Adieu! on ——— I request each of you to accept of my most cordial salutations. ———